

REMARKS

Claims 29-46 and 48-50 now stand in the application, claims 28 and 47 having been canceled and new claims 48-50 added. Reconsideration of the application and allowance of all claims are respectfully requested in view of the above amendments and the following remarks.

The claims have been amended to address the issues raised by the examiner in paragraph 2 of the Office action. New claim 49 is added to reflect the preferably feature previously recited in claim 37.

Additionally, Claim 47 has been deleted and has been replaced with a new independent Claim 50, which is now directed towards a glue gun, and claims the essential features of the glue gun, which distinguish the invention of the glue gun from the prior art.

The prior art rejections are respectfully traversed. It is respectfully submitted that new Claim 48 clearly distinguishes the invention from all the prior art, including Sim.

Claim 48 is directed towards a heating device and claims the heating device as comprising:

- a) a main housing defining a combustion chamber within which fuel gas is converted to heat for heating the main housing,
- b) an exhaust gas port from the combustion chamber for exhausting burnt gases therefrom,
- c) a working body member of heat conductive material in heat conducting engagement with the main housing for receiving heat therefrom,
- d) a passageway extending from the exhaust gas port to an exhaust gas outlet past the working body member for accommodating exhaust gases from the exhaust gas port to the exhaust gas outlet for transferring heat from the exhaust gases to the working body member, and

- c) a heat exchange means comprising a plurality of spaced apart heat exchange fins
 - i) extending from the working body member into the passageway for transferring heat from the exhaust gases to the working body member for reducing the temperature at which the exhaust gases exit from the heating device through the exhaust gas outlet, and
 - ii) defining a circuitous exhaust gas passageway through which the exhaust gases pass between the exhaust gas port and the exhaust gas outlet.

It is respectfully submitted that the prior art does not disclose a heating device which comprises all of features (a) to (e) of Claim 48, and in particular, the prior art does not teach features (e)(i) and (e)(ii). Indeed, it is respectfully submitted that it is precisely features (e)(i) and (e)(ii) which provide the heating device according to the invention with its many advantages over the prior art, which are clearly described in detail in the specification from page 5, line 5 to page 7, line 1.

Sim essentially discloses a gas powered soldering iron which is disclosed with reference to Figs. 1 to 8. Furthermore, Sim is essentially concerned with controlling the supply of fuel gas to a combustion chamber, and in particular, controlling and varying the fuel gas/air ratio of the fuel gas/air mixture supplied to the combustion chamber of a soldering iron. A detailed description of the control system of Sim for controlling the fuel gas and the fuel gas/air ratio with respect to a soldering iron is provided in the specification of Sim from column 4, line 65 to column 8, line 60 with reference to Figs. 1 to 8. After providing a detailed description of the control system for the soldering iron, Sim at column 8, line 61 to column 9, line 34 provides a brief description of use of the control system for supplying a fuel gas/air mixture to a combustion

chamber of a hot melt glue gun head with reference to Figs. 9 and 10. Accordingly, from the point of view of the alleged relevance of Sim to the present invention, it is respectfully submitted that the only aspect of Sim which could be of any relevance to the present invention is the disclosure of Sim from column 8, line 61 to column 9, line 34, and Figs. 9 and 10.

As discussed above, new Claim 48 requires the provision of a heat exchange means which is to comprise features (e)(i) and (e)(ii), namely, the provision of a plurality of spaced apart heat exchange fins extending from the working body member into the passageway for transferring heat from the exhaust gases to the working body member, and furthermore, the heat exchange fins are to define a circuitous exhaust gas passageway through which the exhaust gases pass between the exhaust gas port and the exhaust gas outlet. It is respectfully submitted that Sim fails entirely to disclose either of these two features. Further, it is respectfully submitted that the Examiner has either misinterpreted the original Claim 28, or has misunderstood the disclosure of Sim.

Sim in Figs. 9 and 10 discloses a head, which is identified by the reference numeral 63, of a hot melt glue gun. A glue feed passageway 71 is formed in what appears to be a longitudinally extending thin wall tubular member 70, and the passageway 71 is described as being part of a glue gun, which is indicated by the reference numeral 72. The tubular member 70 which defines the glue feed passageway 71 terminates in a glue nozzle 77. A mono-block casting 67 through which the tubular member 70 extends is provided with a combustion chamber 66 which is “buried deep inside the body of (the) mono-block casting ... 67”, see column 8, lines 67 and 68. A Bunsen tube 64 extends into the combustion chamber 66, and is supplied with gas/air mixture from a controlled fuel gas/air source indicated generally at 65, which according to Sim is

"functionally as described in relation to the soldering iron above", see column 8, lines 65 and 66. The combustion chamber 6 is formed with walls 68, and an exhaust gas port is provided from the combustion chamber 66.

A passageway extends from the exhaust gas port between one of the walls 68 of the combustion chamber 66 and the tubular member 70 to an exhaust outlet 73. Exhaust gases from the exhaust gas port are accommodated through the passageway between the wall 68 of the combustion chamber 66 of the tubular member 70 to the exhaust outlet 73. A baffle 69 is provided in the passageway which extends between the exhaust gas port and the exhaust gas outlet 73, and appears to extend parallel to the wall 68 and the tubular member 70, and is clearly spaced apart from both the tubular member 70 and the wall 68.

However, it is clear that from wherever the baffle 69 extends, it certainly does not extend from the tubular member 70. As conceded by the Examiner, the tubular member 70 is the only part of the device of Sim which could in any way be considered to correspond to the working body member of new Claim 48. In fact, apart from the baffle 69, no other fins extend into the passageway of Sim, and no fins, baffles or other heat exchange means extend into the passageway of Sim from the tubular member 70.

Furthermore, even if one were to consider the baffle 69 as being a heat exchange fin extending from the tubular member 70 as suggested by the Examiner, which the applicant does not concede, the baffle 69 does not form a circuitous exhaust gas passageway for exhaust gases from the exhaust gas port from the combustion chamber 66 to the exhaust gas outlet 73. The baffle 69 is merely arranged to allow the exhaust gases to pass on respective opposite sides thereof, and effectively forms two parallel paths for the exhaust gases. Clearly, the formation of

two parallel exhaust gas paths could not under any circumstances be considered to be a circuitous passageway. The term “circuitous” is defined in Webster’s Third New International Dictionary published by Merriam-Webster as meaning “a circular or winding course: indirect ...”. Clearly the passageway of Sim is neither circular nor winding. The passageway of Sim extends directly from the exhaust gas port to the exhaust gas outlet.

A copy of the title pages and pages 408 and 409 of Webster’s Dictionary is attached for the assistance of the Examiner.

Accordingly, it is respectfully submitted that Sim firstly fails to disclose heat exchange fins extending from a working body member into a passageway which extends between an exhaust gas port from the combustion chamber to an exhaust gas outlet, and secondly, Sim fails to disclose such heat exchange fins extending from such a working body member forming a circuitous exhaust gas passageway through which exhaust gases pass between the exhaust gas port and the exhaust gas outlet. Furthermore, it is respectfully submitted that not only does Sim fail to disclose such an arrangement of exhaust gas fins extending into a passageway from a working body member and forming a circuitous exhaust gas passageway, but there is absolutely no suggestion in the disclosure of Sim of the provision of such heat exchange fins extending from a working body member and forming a circuitous exhaust gas passageway.

It is noted that the Examiner states that “the elements 68 and 69 are considered fins spaced apart and extending from the working body towards the combustion chamber, in that they are located in the proximity of the working body and sequentially move farther towards the combustion chamber”. The basis for this statement is not understood. As discussed above, the Examiner admits that the wall of the tubular member 70 through which the glue feed passageway

71 extends and the nozzle 77 correspond to the working body member of Claim 28. However, nowhere is there any disclosure, nor indeed is there any illustration of the elements 68 and 69 extending from the working body member formed by the tubular member 70 and the nozzle 77. The element 68 is clearly described by Sim as being a wall which forms the combustion chamber 66, and the element 69 is described as being a baffle 69. Clearly, as discussed above, the baffle 69 extends parallel to the wall 68 which forms the combustion chamber 66, and appears to be formed as part of the mono-block casting 67. Under no circumstances could the wall or walls 68 of the combustion chamber or the baffle 69 be considered to be heat exchange fins which extend from a working body member formed by the tubular member 70, and furthermore, even if they were so considered, which the applicant does not concede, they could not under any circumstances be considered to form a circuitous exhaust gas passageway as required by feature (e)(ii) of new Claim 48. As mentioned above, the baffle 69 merely extends across the passageway and is spaced apart from both the wall 68 and the tubular member 70, and furthermore, merely divides the exhaust gas passageway into two parallel paths, which under no circumstances could be considered to be a circuitous passageway. The passageway of Sim is merely a longitudinally extending passageway with two parallel exhaust gas paths defined by the baffle 69 which connects the exhaust gas port from the combustion chamber 66 directly to the exhaust gas outlet 73. Accordingly, it is respectfully submitted that Sim fails to disclose or suggest the invention of new Claim 48. Furthermore, none of the other prior art documents disclose or suggest the invention of new Claim 48.

Accordingly, it is respectfully submitted that the invention of new Claim 48 is novel and not obvious whether Sim is considered separately or combined with any or all of the other prior

art documents, and thus new Claim 48 should be allowable. Accordingly allowance of new Claim 48 is respectfully requested.

Since Claims 29 to 46 and 49 are dependent either directly or indirectly on new Claim 48, it is respectfully submitted that once the Examiner is satisfied of the allowability of new Claim 48, dependent Claims 29 to 46 and 49 should likewise be allowable, and allowance is respectfully requested.

Turning now to new Claim 50, new Claim 50, as discussed above, is directed towards a glue gun and includes the essential features of the glue gun. Additionally, new Claim 50 also includes all the features (a) to (c) of new Claim 48, and accordingly, it is respectfully submitted that once the Examiner is satisfied of the allowability of new Claim 48, new Claim 50 should likewise be allowable, and allowance is respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited.

Respectfully submitted,

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